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ABSTRACT

Three nontraditional intervention strategies are examined as approaches for improving the teaching effectiveness of graduate teaching assistants (TA's) in speech communication. The approaches include the "standard-other model," which demonstrates how others display the desired behaviors; the "self-as-model," which takes advantage of self-evaluation techniques; and the "bug-in-the-ear model," which uses a transistorized receiver to give the learner immediate feedback/direction from an observer of the practice situation. The previous uses, advantages, disadvantages, and suggested applications for speech communication TA training of each of these approaches are discussed. (RL)

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THE USE OF NON-TRADITIONAL INTERVENTION STRATEGIES FOR IMPROVING THE TEACHING EFFECTIVENESS OF GRADUATE TEACHING ASSISTANTS

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THE USE OF NON-TRADITIONAL INTERVENTION STRATEGIES FOR IMPROVING THE TEACHING EFFECTIVENESS OF GRADUATE TEACHING ASSISTANTS[1]

A strong interest in improving college and university teaching exists on many campuses throughout the country. Legislative mandates for improved teaching,[2] requirements of student ratings for faculty tenure and promotion, and a growing number of publications addressing ways of improving teaching[3] all point to an increased awareness and concern about improving the quality of instruction.

Within the field of speech communication, professionals have always been concerned with teaching, particularly as a means of communication. From early on, articles concerned with teaching at the college/university level have appeared on the pages of speech journals.[4] Interest in improving teaching effectiveness has been generated recently by efforts of the Speech Communication Association's Educational Policies Board and has resulted in projects such as the In-Service Workshops for Developing Functional Communication Competencies. SCA has also produced a variety of publications concerned with teaching effectiveness through the ERIC system.[5]

A current emphasis has been an effort to train graduate students in speech communication to become more effective teachers. Bassett and Browning maintain that the future of departments depends upon high quality teaching by graduate teaching assistants (T.A.'s).[6] The two latest issues of Communication Education have included articles dealing with improving T.A. teaching competence.[7] In addition, graduate students themselves are requesting information about teaching.[8] Convention programs, such as the recent one at SCA, "Improving the Teaching Effectiveness of Graduate Teaching Assistants,"

indicate an increasing interest in the instructional training of T.A.'s.

The question is "how do we respond to the charge to improve teaching effectiveness?" Assuming that we can assess a T.A.'s teaching competence and identify target behaviors that need to be developed or changed, how then do we go about intervening to produce the desired new behaviors?

Traditionally, there have been a number of different methods used to improve teaching. Such approaches have included course work, seminars, colloquia, workshops,[9] peer observation and critique,[10] expert observation and critique,[11] team teaching,[12] videotaping,[13] microteaching,[14] and learning packets or resource materials. We, like many others, have used many of these approaches to modify the behavior of T.A.'s. Three of these methods, resource packets, course work, and expert observation and critique, have become standard intervention strategies in our T.A. training program at the University of Washington.[15] As we developed our program, however, we were interested in alternatives to traditional approaches. A search of the literature in various disciplines involved in modifying human behavior (e.g., social psychology, psychiatry, counseling, etc.) as well as education, led us to three approaches which we believe can be developed to improve the teaching effectiveness of T.A.'s in speech communication.

The purpose of this paper, therefore, is to describe the three approaches, examine their previous uses, identify the advantages and disadvantages of each approach, and suggest appropriate applications for improving the teaching effectiveness of graduate T.A.'s in speech communication.

Three Non-Traditional Behavior Modification Techniques

Standard-other Model

Since many people believe that we "teach as we have been taught," the idea of imitating teaching models is not new. The particular use of the approach, however, does provide a unique way of impacting teaching behaviors.

The underlying assumption of this technique is that observation of others can result in changed behavior on the part of the observer without previous enactment of the behaviors and/or reinforcement. Grounded in social learning theory, this strategy has been labeled "modeling," "imitation," "observational learning," and "vicarious learning."[16]

Modeling assumes that an observer can reproduce previously non-existent behaviors that are exhibited by a model. Usually the behaviors consist of either a unique combination of previously learned responses or response of previously learned behaviors to new stimuli. Models can be used to increase or decrease bahaviors and to facilitate previously learned but seldom demonstrated behaviors.

The technique of standard-other model involves a five step procedure:

1. The individual assesses a segment of his or her performance and identifies the behaviors that need to be acquired, eliminated, or changed. This is normally videotaped to preserve for comparison purposes.
2. The individual selects specific behaviors as target behaviors to adopt or modify.
3. The individual views live or media demonstrations of a model performing the specified behaviors appropriately.

4. The individual rehearses the behaviors and attempts to perform them in a given situation. Typically, his or her efforts are videotaped.
5. The individual, frequently in consultation with an expert, assesses behavior change by comparing his or her performance to the baseline tape.

Previous Uses. This approach to modifying behavior has been widely used for various purposes: modeling pre-schoolers' responses to aggressive acts through film,[17] altering children's moral judgments,[18] increasing decision-making behaviors among male and female high school stuients,[19] increasing interviewing skills,[20] improving counseling skills,[21] and treating homosexuals desirous of becoming heterosexuals.[22] Modeling procedures have also been used successfully to develop or extinguish a variety of responses in many counseling problems: marital communication, sexual inadequacies, vocational and personal decision making, and other conditions of fear and anxiety.[23]

Finally, the standard-other model has already shown potential for improving teaching effectiveness. Hosford and Brown reported significant results for five T.A.'s who improved specific teaching behaviors.[24]

Advantages. There are several advantages of standard-other model over other techniques. For instance, the method does not require an approximation of the target behavior to already exist as is necessary when attempting to shape behavior by differential reinforcement techniques. Modeling also provides a means of learning behaviors without exposure to hazardous conditions and unnecessary experimentation and consequences. In addition, use of standard-other model can facilitate skill acquisition as well as the extinction of a variety of emotional responses.[25] Modeling or observational learning also seems to have the capacity to shorten the learning process.[26]

Finally, the technique is also not as costly as other types of behavioral intervention since the investment of time comes primarily from the individual desiring the behavior change rather than counselors, consultants, and/or other experts.

Disadvantages. Despite its strengths, the use of the standard-other model does have certain disadvantages. First, there exists some difficulty in acquiring an effective model for imitation. Since each individual is working on specific, individualized behaviors to improve, it is sometimes impossible to find live or videotaped models performing a particular behavior adequately and with sufficient frequency so that the behavior can be identified, selected out of the total behaviors, and imitated.

Second, observing does not necessarily insure imitation. A variety of factors may enhance or block the imitative process. A model's social characteristics may affect an observer's competency in imitating the behaviors rather than his or her willingness and ability to perform the behaviors.[27] Such variables as the model's prestige,[28] status,[29] power,[30] and similarity to the observer[31] may affect the imitative process in positive ways.

Certain studies indicate, however, that observing another can produce negative reactions.[32] Perhaps viewing a person who is more competent than oneself on particular behaviors serves as a reminder of one's own inadequacies which may create anxiety and block subsequent learning.[33] Such experiences seem to cause some individuals to devalue their own efforts[34] and thus work against behavior change. Observer personality characteristics can also affect one's predisposition to participate in observational learning. For example, differences in behavior change can be attributed to differences in observers' authoritarianism,[35] dependency,[36] and physiological arousal.[37]

Application for Teaching Assistants. Given the success standard-other model techniques have produced in other settings, as well as the work of Hosford and Brown in instructional settings, we believe it to be a useful intervention strategy for improving the teaching effectiveness of T.A.'s. To utilize standard-other model for changing teaching behaviors, the T.A. would assess his or her own performance in the classroom, usually with a videotape to determine any deficiencies and to identify desired behavioral changes. The next step would be to locate a tape or actual live demonstration of another person executing appropriately the specific behaviors the T.A. needs to acquire. Based on the assumption that human behavior can be learned observationally through example, the T.A. would then observe repeatedly the effective demonstration of the behaviors to be imitated. This could be followed by rehearsal of the specific teaching behaviors. The next step would be for the T.A. to try to reproduce the target behaviors with his or her own class. The final step would include assessment of the attempted behavioral changes.

The use of the standard-other model as an intervention strategy for improving teaching effectiveness appears to be most appropriate when the T.A. is attempting to acquire new teaching behaviors. In that case, modeling by another person is essential. For example, such skills as organizing a lecture, providing specific examples, asking particular types of questions, giving directions clearly, and providing verbal reinforcement are skills that can be imitated if an effective model is provided. In addition to these behaviors, T.A.'s at the University of Washington are using standard-other model for improving preciseness of delivery, drawing students into class discussion, responding in depth to student comments, and encouraging students

to respond to one another.

Self-as-Model

The self-as-model intervention technique evolved from the use of the standard-other model and shares the same basic assumptions. Proponents believe observation can result in adding behaviors not previously in the observer's repertoire and that models can be used to increase or decrease behaviors. In addition, advocates of the self-as-model technique believe that a model's characteristics influence the extent to which an observer can imitate the model. Thus, the observer himself or herself, a perfect match, promotes imitation and optimal behavior change.

The steps in the procedure include the following:

1. The individual learns how to observe and record his or her own behavior.
2. The individual identifies a variety of behaviors that are in need of change.
3. The individual selects a specific behavior to change, determines the desired level of performance, then takes base rates from previous tapings.
4. A consultant edits the previous tapings to create a positive model in which the individual is shown performing the behaviors in an appropriate manner. If there are no instances of the desired behaviors, a model tape is constructed from role-playing situations.
5. The individual monitors and records his or her own progress in achieving the desired behavior in actual, real life situations.[38]

Previous Uses. The self-as-model is a more recent intervention strategy but one which has already been widely used with a variety of problems.

Psychologists administering the process claim effective behavior change in cases of depression,[39] marital problems,[40] sexual inadequacies,[41] and prison behavior of inmates.[42] The technique has also been used for purposes of counselor training,[43] micro-counseling,[44] and interpersonal process recall.[45] Recent application in teacher training[46] and student anxiety reduction[47] lends support to its effectiveness in changing instructional behaviors.

Advantages. Self-as-model offers a process which takes advantage of research findings which suggest that greater sensory arousal takes place when an individual observes himself or herself.[48] Several studies suggest that imitative learning is enhanced when an observer's perceived similarity to the model increases.[49] Thus, there exists a better chance that the observer will attend more carefully to the model when that model is himself or herself. A further advantage is that the individual can become self-sufficient in the use of the process and systematically work on changing any behavior from the elimination of simple distracting personal mannerisms to high level cognitive functions in any given environment. The process is simple, does not require a consultant once the process is mastered, and fosters self motivation when the individual can identify behavior change over time. An additional benefit to the participant, according to Braucht, is improved self concept.[50]

Disadvantages. Although self observation typically results in positive outcomes, some individuals may experience problems undergoing self confrontation. In certain instances self observation reinforces negative views already held[51] or causes denial of the behaviors observed.[52] In fact, for some individuals, the anxiety experienced during self confrontation seems to result in diminished subsequent performance. Results of additional studies

suggest that self observation can even be dangerous for certain kinds of individuals.[53]

To avoid such responses in the self-as-model procedure, individuals are not allowed to view instances of inappropriate behavior. They view themselves only when performing the behavior effectively. This requires an experienced editor to analyze the tape, edit out successful instances, and construct a model tape. The process is extremely time consuming and eliminates one of the procedure's strengths, the possibility for complete self reliance in modifying behavior.

Application for Teaching Assistants. Even considering these drawbacks, however, the self-as-model procedure appears promising for modifying teaching behaviors. In the classroom, T.A.'s would need to master the self-as-model procedures to utilize the process. T.A.'s must observe and record their own teaching behaviors, identify behaviors that need changing, select a teaching behavior to focus on, construct an edited tape which provides instances of effective performance of the target behavior, view the tape repeatedly, and assess subsequent progress.

The process could be particularly useful for the extinction of distracting, idiosyncratic mannerisms such as verbalized pauses or inappropriate bodily movement. These types of behaviors can be distracting to students and need to be eliminated. In our training program, T.A.'s are using self-as-model to extinguish both of these types of behaviors.

A second highly appropriate use of the self-as-model occurs when a T.A. is attempting to increase the frequency of behaviors which exist in his or her repertoire but are seldom used. Such behaviors as increasing the frequency of higher order questions, providing more complete summaries during

lecture, eliciting student responses, increasing positive verbal reinforcements, and increasing perception checking fall into this category. While many of these behaviors have already been shown to increase through applying the self-as-model,[54] many additional desired teaching behaviors are within an individual's repertoire and need to be appropriated for more frequent use.

"Bug-in-the-Ear"

A third non-traditional intervention strategy is called "Bug-in-the-Ear," (B.I.T.E.), and is a process of behavior modification induced by verbal prompting via a small transistorized ear plug. The procedure requires special equipment whereby a prompter located away from the interaction situation can view the episode via videotape and simultaneously direct the person who is "bugged" to demonstrate specified behaviors.

The basic assumptions underlying this simultaneous feedback system are that verbal messages can enable individuals to adapt or modify their behavior instantaneously, that intervention in the midst of an interaction is preferred to intervention after the fact, and that individuals can attend to two sets of verbal stimuli in rapid succession. Simultaneous feedback requires a high trust level between the individual being "bugged" and the person giving instructions. Such a system also presupposes a toleration of and willingness to use technology as an aid in changing behavior.

The process itself is not complex and includes five steps for the individual desiring to change his or her behavior:

1. The individual meets with a consultant to set up behavioral goals for a particular interaction segment. These behaviors are normally

based on a prior assessment of the individual's behavior in a similar situation.

2. The individual places a tiny, almost invisible, transistorized receiver behind the ear through which the prompter's voice can be heard.
3. The individual conducts a typical interview, counseling session, or classroom interaction modifying his or her behavior in response to the cues from the prompter.
4. The prompter views the individual's performance through the live videotape and intervenes whenever appropriate with either short, prescriptive suggestions for behavior modification or positive reinforcement for behaviors assessed as effective.
5. The individual views the videotape of his or her behavior, including the verbal directives given by the prompter, to assess the degree of behavior change.

Previous Uses. B.I.T.E. has been employed as an intervention strategy in a variety of situations including the training of mental health professionals,[55] teaching of parenting behaviors,[56] training of student clinical psychologists,[57] teaching of behavior management skills to pedodontics students,[58] teaching of interviewing techniques,[59] and the training of clinical psychologists.[60] At present, its use as an intervention strategy for modifying teaching behavior is relatively untested, but initial work in the Tacoma, Washington School District and at the University of Nebraska may soon produce useful information about further applications.

Advantages. There are numerous advantages of the B.I.T.E. First, the

technique provides intervention and/or reinforcement immediately following an individual's behavior. It eliminates the syndrome of "If you had only done it this way" that frequently accompanies the critique of performances after the event. This aspect of the strategy also allows the prompter to assess the impact and efficacy of his or her instructions to the individual. A second advantage is that the strategy guarantees the presence and resources of an experienced prompter. Relating to a prompter or supervisor in this way seems to lower the initial encounter anxiety level of inexperienced therapists[61] and protects them against difficult situations which could be mishandled to the detriment of the client.[62] Initial studies with pedodontics students indicate that student dentists who were "bugged" showed a greater increase in overall self-confidence than their peers who did not use B.I.T.E., although the change was not statistically significant.[63] A final advantage is that of student satisfaction with the procedure. In the two groups of pedodontics students, the B.I.T.E. group identified its experience to be more positive than the group who employed videotape critique following the students' performances. Eighty percent of the B.I.T.E. group reported they would recommend the experience to other students, while only thirty-three percent of the videotape critique group made similar recommendations.[64]

Disadvantages. Since the use of the strategy is limited and little data has been collected on its effectiveness in changing behavior, the known disadvantages are primarily technical ones. The demand for supervisor/consultant time is high, as the prompter must attend the entire session each time an individual is "bugged." Additional time must be invested in training prompters to intervene in specific ways.[65] Equipment purchase and special videotape setups

to allow the individual to move freely about the room to create problems for extensive use of the technique.

In addition, some individuals find the idea of being "bugged" offensive at first, and users must overcome initial resistance to the method. Establishment of a trust level between prompter and the person being "bugged" is critical and takes time to develop. Two final possible disadvantages exist: the possibility of creating a dependency relationship between the individual and the prompter, and the question of whether the trainee has the opportunity to develop his or her own style under such a system. Answers to these questions need to be investigated before the process can be fully assessed in terms of effectiveness.

Application for Teaching Assistants. Even considering these disadvantages, however, B.I.T.E. offers possibilities for improving teaching effectiveness that other procedures do not. Intervening at critical times affords the opportunity of restatement and clarification. It also provides the T.A. with a second chance at many "teachable moments" which might not be recognized. T.A.'s would need to set behavioral goals for improvement, identify specific teaching behaviors to increase or decrease, practice using B.I.T.E. until they could respond appropriately to the prompter's suggestions during the teaching act, teach a class session modifying their behavior on the basis of the prompter's cues, and assess the videotape for the desired behavioral changes.

The process seems particularly appropriate for improving highly interactive behaviors in which blocks of silence occur to allow for prompting cues. The pacing of such behaviors as asking higher order questions, eliciting student responses, and integrating student responses permits prompter cueing

during silence and T.A. adaptation. The prompter can ask a T.A. to rephrase a question or response, provide a restatement for the T.A. to imitate, expand a question, modify a recall question into an application question, etc. The strategy appears to be most useful in instances where immediate intervention is most important. T.A.'s in our program using B.I.T.E. are working on such behaviors as interspersing lecture with questions, asking higher order (i.e., analysis, synthesis, evaluation) questions, increasing wait time when asking questions, and eliciting student questions for feedback purposes.

Conclusion

In this paper we have described three non-traditional intervention strategies, examined their previous uses, identified advantages and disadvantages of each approach, and suggested applications for T.A. training. While each of these techniques has been widely used for various purposes, to our knowledge, none has been used for improving the teaching effectiveness of graduate T.A.'s in speech communication. We believe these approaches to be promising ones for changing specific teaching behaviors, and we are presently involved at the University of Washington in preliminary testing of the effectiveness of each.

Notes

[1] The authors wish to thank Cheryl Marty-White for her assistance in the preparation of the manuscript.

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[15] See Staton-Spicer and Nyquist, pp. 199-205, for a further description of the T.A. training program at the University of Washington.

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